

FORMS OF ENVIRONMENTAL CRIME IN AGRIBUSINESS¹*Dane Subošić², Dragan Cvetković³, Slaviša Vuković⁴***Summary**

The environment represents our surrounding from which numerous capacities essential for normal functioning of living things are derived. Main, long-term goal of agribusiness is to ensure sufficiently stable production of quality food, and at the same time to preserve essential natural resources, protect the environment and improve the life of individuals and of the broad community. For this purpose numerous measures are implemented which sometimes create new problems facing the human population in increasingly severe form and which, in addition to the expected positive impacts, also have numerous, long-term negative impacts on agro-eco systems. Today, the society is faced with increasingly complex environmental/ecological problems which occur as the result of inadequate use of agro and zoo technical measures in agricultural production, as well as the result of their actions contrary to the „code of good agricultural practice“. The vulnerability ranges from the mildest forms within the limits of tolerance, to the worst forms expressed to greater extent, where the consequences are manifested in form of ecological/environmental offenses. Wide range of forms of environmental crime endangers the environment with the negative impact on human life and health. This form of crime, compared to other forms, is far more dangerous since it can destroy the national economy, lead to spreading of different diseases and extinction of rare species of flora and fauna.

Key words: *agribusiness, environmental crime, forms, prevention*

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Introduction

Civilization is a result of the awareness of the human species on a permanent transformation of nature in order to meet basic needs. Its development is based on a number of activities that apply modern scientific and technical achievements, although these activities are connected with the risk of occurrence of various harmful effects on the environment. Society needs to control risks in these activities without which the normal life flow and social progress are not possible. The control of risky activities includes planned approach⁵ and taking into account all relevant factors⁶ in order to reduce harmful consequences to the minimum.

The range of the environment contamination is from the mildest forms within the tolerance, to the worst forms expressed to great extent, where the consequences are manifested in form of environmental offenses. Environmental crime directly endangers the environment, and indirectly the human life and health.⁷ This form of crime is very susceptible for committing, since it enables generating of huge profits with minimal risk of prosecution, especially in criminal acts with elements of organized international crime. Organized criminal groups are often involved in environmental crime, and their activities are usually associated with trade in natural resources, illegal trade in flora and fauna, trade and disposal of dangerous waste, illegal fishing and illegal trade in minerals and precious stones. These criminal groups can generate huge profits with low risks due to deficiencies in the legislation and implementing regulations in many states⁸. There is an obvious link between environmental crime, social development and the rule of law. Good functioning of the criminal justice system, absence of corruption and attachment of the government to the rule of law is important to the economic, political and social development. On the other hand, in a corrupt environment where there is no respect for the rule of law, civil servants can sign a falsified license to import and export, facilitating the trafficking of illegal goods, or just ignore such a trade, and also prevent proper assessment of the nature and extent of environmental crime in the way to undermine the criminal justice system⁹. Ecological crime is a serious international problem which has various forms, which are not limited to air, water and soil pollution, or the extinction of plant and animal species, but also apply to actions accelerating climate change, a drastic reduction of fish stocks, the devastation of forests, etc. - to the destruction

5 Novković, N., Janković, N., Ceranić, S. (2000): *Planska odluka u agriondustrijskom kompleksu*. Ekonomika poljoprivrede, časopis Saveza poljoprivrednih inženjera i tehničara Jugoslavije, vol. 47 (1-2), p. 97-108, Beograd.

6 Ceranić, S., Maletić, R., Paunović, T. (2005): *Traganje za činiocima nove politike regionalnog razvoja poljoprivrede Srbije*, Ekonomika poljoprivrede: časopis Saveza poljoprivrednih inženjera i tehničara Jugoslavije, vol. 52 (3), p. 365-370, Beograd.

7 See details: Bošković, M. (1993): *Metodika - Otkrivanje i razjašnjavanje ekološkog kriminaliteta*. VŠUP, Beograd.

8 Kangaspunta K., Haen Marshall I. (eds.) (2009): *Eco-crime and justice – Essays on environmental crime*. UNICRI – Public information department, Turin: p. 12.

9 *Ibid.*

of natural resources in general.¹⁰ International environmental crime covers five broad areas of offenses in violation of key international documents as follows: 1) illegal trade in wildlife in violation of the Washington Convention on International Trade in Endangered Species of Flora and Fauna from year 1973, 2) trafficking of substances that deplete ozone in violation of the Montreal Protocol on substances that deplete the ozone layer from year 1987, 3) storage and illegal transportation of various types of hazardous waste in violation of the Basel Convention on the control of trans-boundary movements of hazardous and other wastes and their disposal from year 1989, 4) illegal fishing contrary to measures of control of regional organizations to manage fish stocks, and 5) illegal logging and timber trade when the trees are harvested, transported, bought or sold contrary to national legislation¹¹. Because of the danger of ecological crime, criminal protection of the environment has been considerably expanded. In Serbia, the environment is value protected in the first place by the Constitution and the Penal Code. In addition to the direct criminal-legal protection, the environment is indirectly protected by a number of laws and regulations (by-laws) in other areas, which provide appropriate sanctions for violations of specific human-environmental values¹². In the European Union, more than 200 regulations and directives that are explicitly linked to the natural environment are in effect, and are related to air and water pollution, waste management, biotechnology, nature conservation and nuclear safety. Other issues that are regulated by EU regulations include access to information in the field of environmental protection and liability for environmental damage, and in order to promote environmental protection the European Environment Agency, based in Copenhagen, is established¹³.

Environmental protection is a fundamental precondition for the development of agricultural production, which involves directing and controlling the biological processes of growth and development of plants and animals. At the present level of development of productive forces, relation between agriculture and ecosystem equilibrium is more significant. Already, environmental, economic and social imbalances affect agricultural development and can have a negative impact on future developments¹⁴. In almost all developed countries there has been a degradation of the environment, which, among other things, is consequence of pollution from intensive agricultural production. Extremely rapid growth in agricultural output was

10 Pisarić, M. (2011): *Suzbijanje prekograničnog ekološkog kriminaliteta*. Zbornik radova Pravnog fakulteta u Novom Sadu, Pravni fakultet u Novom Sadu, vol. 45(2), p. 425-439, Novi Sad.

11 Banks, D., Davies, C., Gosling, J., Newman, J., Rice, M., Wadley, J., Walravens, F. (2008): *Environmental crime – A threat to our future*, Environmental Investigation Agency, London, p. 2.

12 Keković, Z., Todorović, Z. (2008): *Ugrožavanje životne sredine u Republici Srbiji – bezbednosni aspekt*. NBP, Kriminalističko-policijska akademija, br. 13(3), 23-40, Beograd.

13 Cardwell, P. J., French, D., Hall, M. (2011): *Tackling environmental crime in the European Union: The case of the missing victim?*, 9th International Conference on Environmental Compliance and Enforcement, 20-24 June 2011, British Columbia, Canada: The International Network for Environmental Compliance and Enforcement, p. 3. (http://inece.org/conference/9/papers/French%20D_Enviro%20Crime_FINAL%20v3.pdf)

14 Vujičić, M., Jovanović, P., Ristić, L. (2008): *Turizam i agrobiznis*, Državni univerzitet u Novom Pazaru, Novi Pazar, p. 31.

mostly at the expense of the environment. Problems in protection of the environment are due to the improper use of chemicals in agricultural production, which are improperly and unprofessionally used by farmers and thus greater amounts of pollutants are introduced into the soil and surface and ground waters.

State of the environmental crime in Serbia

In addition to the general characteristics, environmental crime is characterized by particular characteristics. As its special characteristics, which are analysed in the present study, the following can be mentioned:

- Quantitative characteristics of ecological crimes (scope), the relative share in the total mass of crime, the dynamics
- Structure of ecological crimes or types of crimes that make it, the participation of these offenses in the overall environmental crime and their dynamics.

These characteristics will be analysed based on the available statistical data relating to the Republic of Serbia for the period 2006-2010, which, with all the limitations and drawbacks, however, represent an indispensable source of information on crime detected.

Table 1. Volume of reported crime acts of the environmental crime in the Republic of Serbia in the period 2006-2010.

Year	Total reported crime acts	Reported crime acts of the environmental crime	Index
2006	105.701	2009	1,90%
2007	98.702	1831	1,85%
2008	101.723	1895	1,86%
2009	100.026	2081	2,08%
2010	74.279	1568	2,12%

Source: Statistical bulletin of the Statistical Office, 2006, 2007, 2008, 2009, 2010, Belgrade.

In regard to the scope of environmental crime on the territory of the Republic of Serbia and its relative share in the total volume of crime, Table 1 shows that the share of ecological criminal offenses in each of the observed years was about 2%. On the territory of the Republic of Serbia, in year 2006 - 2009 were reported, in 2007 - 1831, in 2008 - 1895, in year 2009 - 2081, in 2010 - 1568 criminal acts of the ecological crime. Significant reduction in the number of reported crimes in years 2007 and 2008 is noticeable, in the relative terms and in year 2010 in absolute terms. During the reporting period, the tendency of notification of environmental crime is rather uniform, except in year 2010, but in that year the share of the total environmental crime in total crime was about 2%.

Table 2. Structure of reported crimes of environmental crime in the Republic of Serbia in the period 2006-2010.

Year	Total CA against the environment	Pollution of environment Article 260	Failure to take measures to protect the environment Article 261	Damage to environment Article 264	Introduction of hazardous materials to Serbia and illegal processing, disposal and storage of hazardous materials Article 266	Devastation of forests Article 274	Forest theft Article 275	Illegal hunting Article 276	Illegal fishing Article 277	Other CA
2006	2009	16	9	4	1	182	1543	134	63	58
2007	1831	19	24	7		142	1314	154	68	107
2008	1895	21	12	2		128	1374	115	112	131
2009	2081	16	8	16		157	1462	172	111	39
2010	1568	7	4	8		69	1090	99	63	218

Source: Statistical bulletin of the Statistical Office, 2006, 2007, 2008, 2009, 2010, Belgrade

In regard to the structure of discovered and reported/filed charges for ecological crime offenses, the data in Table 2 show that the crime act “Forest theft” stipulated in Article 275 of the Criminal Code of the Republic of Serbia (hereinafter: SCC) is dominating in the structure of ecological criminal offenses in the Republic of Serbia for the period 2006-2010. This offense comprises 76% of the total number of reported ecological crime in year 2006, 73.2% in year 2007, 72.5% in year 2008, 70.25% in year 2009 and 69.5% in year 2010, or about 72.3% on average for that period.

The next criminal offense in respect to the frequency and share is “Illegal hunting” (Article 276 SCC), which makes an average of about 7.2% of the total number of reported offenses of ecological crimes in observed five-year period. About 4.4% of the total number of reported offenses of ecological crimes is criminal offense “Illegal fishing” (Article 277 SCC). The above three crimes together with the offense – “Devastation of forests” (Article 274 SCC) in the structure of discovered and reported ecological crimes make up about 91%, while other crimes together account for about 9%.

Although in recent years the environmental crime is in expansion, the percentage of filed charges for criminal offenses against the environment is negligible compared to other crimes. Presented statistics show large differences between the numbers of filed charges for criminal acts as stipulated by SCC, Chapter XXIV. The data show that the most common charges are for forest theft, illegal hunting and fishing, as well as the devastation of forests. Data of other researchers show that the illegal timber trade is one of the most present illegal

activities in the field of environmental crime¹⁵. Considering that the wood is difficult to smuggle hidden, complex methods are used in the illicit trade, and only few organizations are able to exploit the opportunities of this illegal trade. The evidence from Indonesia shows that companies that cut were often involved in extensive illegal cutting, and senior executives in these companies were accused of organizing illegal trade. Poor regulation and the difficulty in identifying the seized wood contribute to the existence of weak evidence to show the volume/scope of trade. The relationship between the illegal trade and the threat that it poses to the endangered species is not only direct, because few species of trees are on the protected list. However, logging destroys the habitat of endangered species, and often directly protected animal species¹⁶.

Data from these tables show that the small number of crimes against the environment has been detected, although it can be assumed that the real number of committed crimes in this field is much higher. The crimes that are not registered represent ‘‘dark figure’’ of ecological crime¹⁷.

Environmental pollution and other environmental crimes in agribusiness

Many contemporary environmental damages are associated with the way in which the livelihood of people is reconstituted and reorganized through the global system of production, so that, for example, the globalization of food production, and the production and use of new technologies and chemical products in agriculture and production of food, have created a variety of risks for people, animals, the environment and health, so that in many cases the long term effects of the new development in the field of food production are still unknown¹⁸. Patent protection ensures that large agribusiness companies are able to control the market and production processes, especially when it comes to patents of existing organic materials and technological development (through genetic modification of organisms), and the goal is to make a direction producers - farmers - reliance on commercially purchased seeds and related products such as fertilizer and pesticides¹⁹.

Ecological crime comprises a wide range of activities. Due to space constraints and objectives, offenses which directly incriminate endangering of the environment will be discussed: water, air, soil, plant and animal life in agricultural practice. The problem of degradation of the environment due to improper use of measures and resources in agribusiness and due to

15 Cook, D., Roberts, M., Lowther, J. (2002): *The International Wildlife Trade and Organised Crime – A review of the evidence and the role of the UK*. Regional Research Institute, University of Wolverhampton, p. 16.

16 *Ibid.*, p. 16.

17 See details: Bošković, M., Banović, B. (2001): *Kriminalistika metodika*. VŠUP, Beograd.

18 White, R. (2009): *Dealing with climate change and social conflict: a research agenda for eco-global criminology*. – In: Kangaspunta K. & Haen Marshall I. (eds.) *Eco-crime and justice – Essays on environmental crime*. UNICRI – Public information department, Turin, p. 25.

19 *Ibid.*

action of natural and legal persons contrary to the “code of good agricultural practice” will be analysed. In the following presentation, a brief overview is given of the basic form of pollution of main factors of the environment - water, air and land in agricultural production and the essence of the individual elements that affect the quality of the environment.

Sources and methods of water pollution in agricultural production

Agriculture is a major consumer of water, and its water requirements are estimated at 70% and in less developed countries even more than 90%²⁰. These requirements are even ahead of the requirements of cities and industries, and it is very important to protect the water from pollution.

On many farms, wells that supply people with drinking water are located near the sources of pollution that can be dangerous to human health. Agricultural production also pollutes the water in the canals, rivers and lakes. Water is polluted by nitrates runoff from fertilizers with other harmful compounds such as phosphates, fats, oils, pesticides and pathogens²¹.

The application of mineral and organic fertilizers and crop cultivation is an important agro-technical and economic measure, but its excessive use can threaten water and soil quality, and therefore it has to meet the requirements of agricultural crops for nutrients. Otherwise, a high concentration of nutrients can cause eutrophication of water bodies²², water/soil acidity imbalance, and heavy metals and harmful substances can get into groundwater and surface water²³.

Among the most serious sources of water pollution are backyard livestock farms, barns, manure storage facilities or storages of manure on the fields. When discharged into surface water, biodegradable materials are broken down and ammonia oxidizes, consuming in the process dissolved oxygen in the water that is necessary for underwater plant and animal species. Serious reduction of the level of dissolved oxygen can cause death of the entire river wildlife. Manure can get into surface water directly from animals on pasture, due to damage to the structure of the warehouse, or overflow or errors of farmers, as well as

20 Kovačević, D., Lazić, B., Milić, V. (2011): *Uticaj poljoprivrede na životnu sredinu*, International Scientific Symposium of Agriculture - Agrosym Jahorina 2011, November 10-12, 2011, Jahorina, University of East Sarajevo, Faculty of Agriculture, RS, B&H, University of Belgrade, Faculty of Agriculture, Serbia, Academy of Engineering Sciences of Serbia, Serbia, IAE, Serbia, B.EN.A, Greece, BSAAE, Serbia, p. 37 (http://www.pof.unssa.rs.ba/Agrosym_2011_Proceedings/pdf/Plenary_lectures/Kovacevic_D_et_al.pdf)

21 Bergman, N., Carlson, G., Dalmacija, B. (2010): *Pravila dobre poljoprivredne prakse*, DREPR, p. 16. (http://www.avm.rs/dokumenti3/Pravila%20dobre%20poljoprivredne%20prakse_nasl.pdf)

22 *Eutrophication* - process of aging of aquatic eco-systems. The increase of concentrations of nitrogen and phosphorus occurs, as well as increase of other biogenic elements, causing increased intensity of primary production.

23 Bergman, N., Carlson, G., Dalmacija, B. (2010): *Pravila dobre poljoprivredne prakse*, DREPR, p. 16. (http://www.avm.rs/dokumenti3/Pravila%20dobre%20poljoprivredne%20prakse_nasl.pdf)

through leaching if applied in excessive amounts or not implemented properly. For example, the application of manure on frozen or saturated soil can result in discharging into streams. Other conditions that increase the risk of manure runoff into surface waters are steep slopes soil, heavy rain, low porosity of soil and proximity to surface waters such as rivers and lakes. Runoff from fields where manure has been applied can be a source of contamination by pathogens, especially if the rainy season comes immediately after the application of manure. Microorganisms are usually retained in soil layers near the surface, creating the possibility for the mechanism of pathogen transportation by surface water flows²⁴.

Generally, mineral fertilizers pose risk to the environment if not stored or not handled with proper and adequate care. The contamination of water can occur if the fertilizer residues and empty containers are disposed of or equipment used washed in places inadequate for these purposes. The negative impact of penetration of fertilizers in the water is reflected in increased concentrations of nitrates and phosphates, their accumulation and ultimately eutrophication of aquatic species and extinction of plants and animals.

Waste water from farms typically consists of dirty water (drained from plant cultures, liquid from washing of the equipment in the milking parlour and dairy plants). These wastewater pollutants are much greater contaminants than the sewage water from households with high BOD (biological oxygen demand), which is why their collection and storage and spreading to land are two major critical points in their handling. Intensive pollution of waterways can occur if the facilities for the storage or pools/basins/tanks are of inadequate capacity resulting in overflows or improper construction resulting in leakage.

Sewage waste water from farms is traditionally collected in the pits/lagoons, and after a period of confinement of usually 60 days, accumulated sludge is applied to fields as fertilizer. This practice causes the emission of greenhouse gases (methane), and can lead to leakage from the pits/lagoons/tanks into groundwater if not properly constructed pit²⁵.

Pesticides can occasionally cause water pollution, mainly because they are not stored, applied/ deployed properly or are blown into streams during application. The consequence of such treatment may be the presence of heavy metals in water (e.g., mercury, cadmium, copper), and indirectly, in living organisms, which can lead to acute intoxication or accumulation of toxic elements²⁶.

Sources and methods of air pollution in agricultural production

Of all forms of pollution of environmental factors, air pollution is one of the oldest forms of pollution, which occurred when the first craft activities started during ancient times²⁷. Sources of air pollution in agricultural production come from facilities and yards on livestock farms,

24 *Ibid*, p. 17.

25 *Ibid*, p. 18.

26 *Ibid*, p. 18-19.

27 See details: Bošković, M. (1993): *Metodika - Otkrivanje i razjašnjavanje ekološkog kriminaliteta*. VŠUP, Beograd.

farmland during and after the application of manure and sludge, production facilities and other facilities for manufacturing of animal products. Emission flows contain: dust, greenhouse gases - methane, nitrous oxide and ammonia. Also, changes occur in the natural relations and the concentrations of the main air components. These gases and particles can get into the atmosphere naturally, due to volcanic eruptions and natural fires, but more often due to the influence of human activities in agriculture, burning of coal, oil, natural gas and wood²⁸.

In agriculture, the ammonia is traditionally recognized as a problem that occurs in livestock facilities with poor ventilation or in those which are poorly maintained. Ammonia accumulated within the system facilities can adversely affect the health of animals, and thus the production. Ammonia has a negative impact on human health, irritates the eyes and respiratory tract even in low concentrations. Generally, ammonia poses a risk to the environment whether it appears as a gas or when transferred to soil and water.

Ammonia fumes from animal excrement (faeces, urine) can have a significant negative effect if the rules of good hygiene in the facilities for livestock are not respected. Storage of any kind of manure is followed by emissions of ammonia, and to avoid the loss of nitrogen the direct contact of air must be reduced by covering manure storages. However, storage of solid and semi-solid manure is for practical purposes impossible to cover²⁹.

Types and sources of pollution of land in agricultural production

Soil³⁰ is of special importance to agriculture, and its pollution is increasingly present. In recent times, various chemical substances are used extensively to increase the resistance and obtain higher yields, primarily fertilizers, pesticides, imported phosphorous fertilizers supplied with uranium and other resources used to stimulate growth and development of plants that pollute the soil. Causes of soil pollution are industrial waste water, toxic gases from industrial plants and the disposal of radioactive waste. All this leads to a greater presence of radioactive nuclides in soil, and excessive use of nitrogen fertilizers in particular affects the plants and soil pollution by nitrates and nitrites, which results in the acceleration of the alkalization and salinization, as well as the pollution of groundwater³¹.

28 Kovačević, D., Lazić, B., Milić, V. (2011): *Uticaj poljoprivrede na životnu sredinu*, International Scientific Symposium of Agriculture - Agrosym Jahorina 2011", November 10-12, 2011, Jahorina, University of East Sarajevo, Faculty of Agriculture, RS, B&H, University of Belgrade, Faculty of Agriculture, Serbia, Academy of Engineering Sciences of Serbia, Serbia, IAE, Serbia, B.EN.A, Greece, BSAAE, Serbia, p. 38.

29 Bergman, N., Carlson, G., Dalmacija, B. (2010): *Pravila dobre poljoprivredne prakse*. DREPR, p. 16. (http://www.avm.rs/dokumenti3/Pravila%20dobre%20poljoprivredne%20prakse_nasl.pdf)

30 Bošković, M. (1993): *Metodika - Otkrivanje i razjašnjavanje ekološkog kriminaliteta*. VŠUP, Beograd, p. 23.

31 *Ibid*, pp. 23-24.

The goal of sustainable agriculture is preservation of healthy and good quality soil, so it must be carefully cultivated and protected from erosion³². Land degradation is the loss of fertility due to changes in physical properties (soil type, humidity), chemical (pH, organic matter, nutrients and trace elements) and microbial characteristics, and agricultural activities significantly affect these characteristics³³.

Organic matter content in the surface layer of the soil affects its physical, chemical and biological properties, particularly its structural stability. Soil stability is reflected in the probability of occurrence of erosion, ease of cultivation of land, water retention and nutrient availability to plants, and it also affects the behaviour and mobility of contaminants. Increased concentrations of heavy metals (mercury, cadmium, copper, etc.) due to the application of pesticides and herbicides accumulate in plants, entering the food chain and are introduced into animals and humans. High concentrations of heavy metals have toxic effects, so for that reason those are regulated by special laws³⁴.

Soil erosion affects water pollution with particulate matter and sediment and nutrient and pesticide pollution, which are carried by particles of soil. Compared with air and water pollution, soil pollution process is slower, but polluted states are more stable and of long-term consequences. Pollution and destruction of land are not yet fully perceived, and the consequences are to great extent based on estimates³⁵.

The main manifestation of ecological crime in agriculture is "Environmental pollution", crime incriminated in Article 260 SCC. This offense has four forms. The first paragraph describes the basic operations of a criminal offense, which could be done intentionally; the second paragraph is a form of negligence, while in the paragraphs 3 and 4 severe forms of the offense are described. The main action in the commission of the offense consists in the violation of regulations on the protection, preservation and enhancement of the environment, which as a consequent action results in pollution of water, air or soil to a greater extent or over a wider area³⁶. It is a blanket provision, because violations can relate to violations of the Law on Environmental Protection³⁷, Law on Air Protection³⁸, Law on

32 Kovačević, D., Lazić, B., Milić, V. (2011): *Uticaj poljoprivrede na životnu sredinu*, International Scientific Symposium of Agriculture - Agrosym Jahorina 2011, November 10-12, 2011, Jahorina, University of East Sarajevo, Faculty of Agriculture, RS, B&H, University of Belgrade, Faculty of Agriculture, Serbia, Academy of Engineering Sciences of Serbia, Serbia, IAE, Serbia, B.EN.A, Greece, BSAAE, Serbia, p. 38.

33 Bergman, N., Carlson, G., Dalmacija, B. (2010): *Pravila dobre poljoprivredne prakse*. DREPR, p. 19. (http://www.avm.rs/dokumenti3/Pravila%20dobre%20poljoprivredne%20prakse_nasl.pdf)

34 *Ibid*, p. 20.

35 Bošković, M. (1993): *Metodika - Otkrivanje i razjašnjavanje ekološkog kriminaliteta*. VŠUP, Beograd, pp. 23-24.

36 Škulić, M., et al. (2011): *Priručnik za zaštitu životne sredine*. Udruženje tužilaca i zamenika javnih tužilaca Srbije, Beograd, p. 12.

37 Službeni glasnik RS, br. 36/09 i 88/10.

38 Službeni glasnik RS, br. 36/09.

the protection and sustainable use of fish stocks³⁹, the Animal Welfare Act⁴⁰, the Act on Protection against Ionizing Radiation and Nuclear Safety⁴¹ and the Law on chemicals⁴². Penalty stipulated for the basic form of is a sentence ranging from six months to five years and a fine.

For the existence of severe form, stipulated in paragraph 3 of Article 260 of SCC, the destruction of or damage to animal or plant life on large scale has to occur, or environmental pollution to the extent that its removal takes long time and extensive expenses. Penalty stipulated for the qualified form is punishable by imprisonment of one to eight years and a fine.

If the basic form of the offense is committed negligently, stipulated sanction is a fine or imprisonment of up to two years (Article 260, paragraph 2 of SCC), and if it is a severe form of negligence stipulated in paragraph 3, penalty prescribed is imprisonment of six months to five years and a fine. In case of suspended sentence for these types of offenses, the court may order the offender to undertake, in the specified time limit, certain prescribed measures to protect, preserve and improve the environment (paragraph 5)⁴³.

Similar to foregoing manifestations of the ecological crime is offense – “Failure to take measures to protect the environment” from Article 261 of RSCC. The offense under paragraph 1 is committed by an official or responsible person who is not taking appropriate measures to protect the environment or do not comply with the decision of the competent authority to undertake environmental measures. In the first case, when determining the action executed, the sanction is provided in the event of failure to take measures to protect the environment, which is required by law and by-laws. In the second case, the sanctions are foreseen in case of failure to take measures stipulated by the individual act of the competent authority. This is a blanket norm and the existence of crime depends only on individual acts/documents and regulations. Consequence of the offense is an abstract threat, and the offense can be done intentionally and negligently. An example would be failure to install a device for purifying which the responsible person was obligated to do according to the regulations on protection of the environment from pollution.

Punishable penalties include fines or imprisonment of up to three years if the basic form of the offense (paragraph 1) is committed premeditated, or a fine or imprisonment of up to one year if the offense is committed negligently. In case of a suspended sentence, the court may order the offender to take regulated measures to protect, preserve and improve the environment within certain specified time limit. If the environmental pollution occurred, it is stipulated that the offender will be punished for the crime of Article 260 of SCC.

39 *Ibid.*

40 Službeni glasnik RS, br. 41/09.

41 Službeni glasnik RS, br. 36/09.

42 Službeni glasnik RS, br. 36/09, 88/10 i 92/11.

43 Škulić, M., et al. (2011): *Priručnik za zaštitu životne sredine*. Udruženje tužilaca i zamenika javnih tužilaca Srbije, Beograd, p. 14.

In addition to these forms, which might be called the classical environmental crime, it is important to note *Illegal hunting* (Article 276) and *Illegal fishing* (Article 277), as forms of environmental crime in agribusiness, which significantly threaten the environment and at the same time generate *high profits* for the perpetrators, and are very hard to detect, causing extremely serious adverse consequences for the environment, with the existence of a high risk of *extinction of rare species of fauna*.

There are a number of other offenses which may also greatly endanger the environment. They include crimes such as transmitting infectious animal and plant diseases (Article 270), negligent veterinary services (Article 271), the production of harmful devices for the treatment of animals (Article 272), contamination of food and water for animal nutrition and drinking (Article 273), the devastation of forests (Article 274) and forest theft (Article 275). The European Union has adopted in 2008 the Directive 2008/99/EC on the protection of the environment through criminal legislation, and the deadline for its implementation in the Member States was December 2010. Given that the criminal legislation often had a secondary role in relation to administrative sanctions and civil law penalties, this Directive may indicate stronger commitment attitudes in relation to the violation of the laws governing the environment⁴⁴. Otherwise, in year 1998, The Council of Europe adopted the Convention on the protection of the environment through criminal legislation, but it has not yet taken effect, because it was ratified by only one party. For the purposes of prevention of environmental crime in agribusiness, the operation of the inspection authorities responsible for the control of compliance with numerous laws and regulations in the field of environmental protection is very important. The success of prevention of these crimes proscribed by the Criminal Code of the Republic of Serbia depends largely on the efficiency of the control exercised by the inspection bodies. In this way, the imposition of criminal sanctions which usually cannot eliminate the damage caused to the environment can be prevented in cases of severe environmental pollution.

Conclusion

The development of civilization, industry and agriculture, the expansion of modern transportation and contemporary human activities, population increase, have significantly disrupted the relationship between man and nature. That attitude, along with excessive use of natural resources, food shortages, global climate change, ozone layer reduction, greatly prejudice the survival of mankind.

Environmental degradation in the agricultural production is the result of deliberate omission or failure to implement policies, guidelines and technical standards in the handling of various hazardous energy sources and raw materials, or handling or treatment of otherwise hazardous devices, thus creating conditions for the risk of accidents of various kinds, scope

44 Cardwell, P. J., French, D., Hall, M. (2011): *Tackling environmental crime in the European Union: The case of the missing victim?*, 9th International Conference on Environmental Compliance and Enforcement, 20-24 June 2011, British Columbia, Canada: The International Network for Environmental Compliance and Enforcement, p. 1.

and dimensions of the area and encompassing all that was found in it. These activities constitute criminal conduct, and environmental offenses. Depending on the scope and intensity of the impact on the environment, the implemented activities, the characteristics of the offender and the offense conformity to rules of conduct specified in the laws and by-laws of a general nature, and types of sanctions imposed, numerous environmental offenses are distinguished.

The concept of modern agribusiness development should be based on sustainable management of natural resources and environmental protection, which is achieved by planning and sustainable use of natural resources, as a necessary condition for a balance between environmental protection and economic development. Therefore, the policy of development of modern agribusiness sets the coordination of development with minimal impacts to the environment as the major objective.

Threats to the environment through criminal offenses are a growing problem that causes serious damage. In recent years, a number of actions that threaten it have multiplied. In addition, this type of crime is susceptible to the perpetrators because of the possibilities of realizing large profits with minimal risk of detection and prosecution, especially when it comes to criminal offenses with elements of organized crime of international character. The empirical analysis in this matter may serve as an illustration for an appropriate image aspect of professional practice and collaboration with academic circles. Statistics show that a small number of environmental offenses are revealed, although it can be assumed that the dark figure in this form of criminality is significant.

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POJAVNI OBLICI EKOLOŠKOG KRIMINALITETA U AGROBIZNISU

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Rezime

Životna sredina predstavlja okruženje iz koga se crpe brojni kapaciteti za normalno funkcionisanje živih bića. Osnovni, dugoročni cilj agrobiznisa je da obezbedi dovoljno stabilnu proizvodnju kvalitetne hrane, uz očuvanje osnovnih prirodnih resursa, zaštitu životne sredine i poboljšanje života pojedinca i šire zajednice. Za te svrhe ljudi koriste brojne mere koje ponekad stvaraju nove probleme sa kojima se čovečanstvo suočava u sve oštrijim formi i koje pored očekivanih pozitivnih imaju brojne dugoročno negativne efekte u agroekosistemima. Danas se društvo sve više susreće sa složenim ekološkim problemima koji se javljaju usled neadekvatne upotrebe agro i zootehničkih mera u poljoprivrednoj proizvodnji, kao i usled njihovog postupanja suprotno „kodeksu dobre poljoprivredne prakse“. Dijapazon ugroženosti kreće se od najblažih oblika u granicama tolerancije, do najtežih oblika izraženih u većem obimu, gde se posledice manifestuju u vidu ekoloških delikata. Širok spektar pojava oblika ekološkog kriminaliteta ugrožava životnu sredinu sa negativnim uticajem po život i zdravlje ljudi. Taj vid kriminaliteta, u poređenju sa drugim vidovima, je daleko opasniji, jer može uništiti nacionalnu ekonomiju, proširiti razne bolesti i dovesti do istrebljenja retkih vrsta flore i faune.

Ključne reči: *agrobiznis, ekološki kriminalitet, oblici, sprečavanje*

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